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KNEELING WALKER SYSTEMS AND METHODS

RELATED APPLICATIONS

This application is a continuation-in-part of U.S. Patent Application Serial No. 10/410,028 filed on April 8, 2003.

TECHNICAL FIELD

The present invention relates to walker systems and methods and, in particular, to kneeling walker systems and methods that support one leg while being propelled using the other leg.

BACKGROUND OF THE INVENTION

Numerous devices have been created to provide and enhance mobility to individuals with physical disabilities. Two common examples of such devices are wheel chairs and walkers. The present invention relates to a special class of devices for assisting disabled persons that combine aspects of a walker with aspects of a wheelchair. In particular, certain individuals have disabilities where only one leg is disabled. Persons with one good and one disable leg use a wheeled device often referred to as a kneeling walker.

A kneeling walker typically comprises a frame that is supported by a plurality of wheels. A handle extends upward from the frame, and a kneeling pad is supported by the frame at a convenient location. In use, the user places the disabled leg on the knee pad and grasps the handle. The user then pushes with the good leg to propel the device. The frame carries the user's weight from the knee pad to the wheel assemblies so that the user moves along with the kneeling walker device. The handle is

typically a fixed member that provides support to the user. While the handle does not turn the wheels, the handle can assist the user in turning the kneeling walker by allowing the user to slightly lift the front or rear wheels as necessary to change the direction of the kneeling walker. Often, a hand operated brake is provided to allow the user to slow or stop the kneeling walker; the hand brake is typically used in addition to a stopping force applied by the good leg.

While the basic concepts of the kneeling walker are known, the need exists for assemblies that are easy to use, can be adjusted to accommodate users of different sizes, and are foldable for storage and/or transportation.

SUMMARY OF THE INVENTION

The present invention may be embodied as a walker system comprising a frame, a handle, a plurality of wheel assemblies, a pad assembly, and a post locking member. The frame comprises a pad support. The handle is supported by the frame. The wheel assemblies support the frame. The pad assembly comprises a pad member and a pad post. The pad support slidably supports the pad post such that a position of the pad member relative to the frame can be changed. The post locking member secures the pad post relative to the pad support to substantially fix the position of the pad member relative to the frame. Optionally, the handle member can be slidably mounted to the frame for movement between lower and upper positions.

The present invention may also be embodied as a method of supporting an elevated leg. A frame comprising a pad support is provided. A handle is supported on the frame. A plurality of wheel assemblies are provided to support the frame. A pad assembly comprising a pad member and a pad post is also provided. The pad post is slidably supported on the

pad support such that a position of the pad member relative to the frame can be changed. The pad post is secured relative to the pad support to substantially fix the position of the pad member relative to the frame at a desired location.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation view of a kneeling walker assembly of a first embodiment of the present invention being used to assist a user in moving along a surface;

FIG. 2 is a side elevation view of the kneeling walker of FIG. 1 illustrating a handle and pad assembly in lower positions relative to the frame;

FIG. 3 is a top plan view of the kneeling walker assembly of FIG. 1;

FIG. 4 is a side elevation view similar to that of FIG. 2 depicting a handle and pad assembly in upper positions relative to the frame;

FIG. 5 is a side elevation view depicting the kneeling walker as shown in FIG. 2 in a folded or storage configuration;

FIG. 6 is a side elevation view depicting a brake assembly that may be used in conjunction with a kneeling walker as depicted in FIG. 2;

FIG. 7 is a side elevation view of a kneeling walker assembly of a second embodiment of the present invention that may be used to assist a user in moving along a surface;

FIG. 8 is a side elevation view of a kneeling walker assembly of a second embodiment of the present invention

FIGS. 9A and 9B are front, cut-away views depicting offset pad members that may be used by the kneeling walker of FIG. 7;

FIG. 10 is a front elevation view of the kneeling walker of FIG. 7;

FIG. 11 is a side elevation view illustrating a handle assembly of the kneeling walker of FIG. 7;

FIG. 12 is a side elevation view depicting the handle assembly of the kneeling walker of FIG. 7 in a folded configuration; and

FIG. 13 is top plan view taken along lines 13-13 in FIG. 8.

DETAILED DESCRIPTION OF THE EMBODIMENTS

Referring initially to FIG. 1, depicted at 10 therein is a kneeling walker constructed in accordance with, and in embodying, the principles of a first embodiment of the present invention. The kneeling walker 10 is shown facilitating movement of a person 12 along a surface 14. The user 12 is supporting an elevated leg 16 on the kneeling walker 10. In addition, the user 12 is using a good or pushing leg 18 to push the user 12 and the kneeling walker 10 along the surface 14. The kneeling walker 10 may thus be used in a manner that is generally similar to that of conventional kneeling walkers. However, the precise use of the walker 10 will depend in large part on the needs of the user 12.

The walker 10 comprises a frame 20 on which is mounted a handle 22 and a pad assembly 24. The frame 20 is supported by a plurality of wheel assemblies 26 for rolling movement along the surface 14. As generally shown in FIG. 1, the user 12 supports the knee of the elevated leg 16 on the pad assembly 24. Most of the weight of the user 12 is carried though the pad assembly 24, the frame 20, and the wheel assemblies 26 to the surface 14. The user 12 grasps the handle 22 for stability. The user then pushes with the pushing leg 18 to cause the kneeling walker 10, and the user 12 carried thereby, to move a short distance along the surface 14. This process is repeated until the user 12 reaches a destination point.

The handle 22 and the pad assembly 24 are both adjustable relative to the frame 20. In particular, FIG. 4 illustrates the pad assembly 24 in an upper position while FIG. 6 illustrates the pad assembly 24 in a lower position. Similarly, FIG. 4 illustrates the handle 22 in an upper position, while FIG. 6 illustrates the handle 22 in a lower position. Both the handle 22 and the pad assembly 24 can be locked into intermediate positions between the upper and the lower positions shown in FIG. 4 and

FIG. 6 respectively.

More specifically, FIGS. 2-4 show that a post locking assembly 30 is provided to secure a position of the pad assembly 24 relative to the frame 20. Similarly, at least one handle locking assembly 32 is used to secure the handle 22 relative to the frame 20. FIGS. 2 and 4 show that a post locking hole 34 is formed in the example frame 20 to allow the post locking assembly 30 to secure the pad assembly 24 in any one of a plurality of positions relative to the frame 20.

Similarly, FIGS. 2 and 4 show that one or more handle locking holes 36 may be formed in the frame 20 to allow the handle 22 to be secured in one of the plurality of positions relative to the frame 20. As perhaps best shown in FIG. 3, the example kneeling walker 10 comprises first and second handle locking assemblies 32a and 32b and first and second handle locking holes 36a and 36b.

FIG. 3 also shows that the frame 20 comprises first and second front leg portions 40a and 40b on which first and second front wheel assemblies 26a and 26b are located. The frame also defines first and second rear leg portions 40c and 40d on which first and second rear wheel assemblies 26c and 26b are located. The frame example 20 further comprises a support plate 42 from which is suspended a support tube 44. The support tube 44 slidably supports the pad assembly 24 as will be described in further detail below.

As perhaps best shown in FIG. 3, the frame 20 further comprises two handle support portions 46a and 46b. The handle support portions 46a and 46b engage and support the handle 22 for movement between the lower and upper positions described above.

FIG. 3 further shows that the frame 20 comprises a front frame assembly 50a and a handle frame assembly 50b. The front frame assembly 50a defines first and second hinge portions 52a and 52b, while the handle frame assembly 50b defines third and fourth hinge portions 52c

and 52d. First and second hinge members 54a and 54b extend through the hinge portions 52 to rotatably attach the front frame assembly 50a to the handle frame assembly 50b. In particular, the first hinge member 50a extends through the first and third hinge portions 52a and 52c, while the second hinge member 54b extends through the second and fourth hinge portions 52b and 52d.

The front frame assembly 50a further comprises first and second front portions 56a and 56b that extend between the first and second hinge portions 52a and 52b and the first and second leg portions 40a and 40b.

First and second locking assemblies 58a and 58b extend between the front portions 56a and 56b of the front frame assembly 50a and the first and second rear leg portions 40c and 40d, which are formed by the handle frame assembly 50b.

The hinge members 54a and 54b allow the front and handle frame assemblies 50a and 50b to pivot relative to each other between a use configuration as shown in FIGS. 2 and 4 and a storage configuration as shown in FIG. 5. The frame locking assemblies 58a and 58b conventionally comprise two bars that are pivotally connected to each other and to the frame assemblies 50a and 50b for movement between a locked configuration as shown in FIG. 4 and an unlocked configuration as shown in FIG. 5. In the locked configuration, the frame locking assemblies 58a and 58b prevent the front portion 56a and 56b from moving forward relative to the rear leg portions 40c and 40d. However, the frame locking assemblies 58a and 58b can be pivoted upward to allow the front portions 56a and 56b to move towards the rear leg portions 40a and 40b such that the frame 20 collapses into the storage configuration of FIG. 5.

As generally described above, the frame 20 comprises front and handle frame assemblies 50a and 50b that are rotatably connected by two hinge members 54. The frame assemblies 50a and 50b are typically formed of lightweight metal tubes that are bent into a desired configuration

and then welded together to obtain the frame assembly.

In particular, the example front frame assembly 50a comprises first and second front frame side members 60a and 60b. The front frame side member 60a and 60b are formed of a metal tube that is bent at an angle of approximately between 110° and 160°. The front frame side members 60 form the first and second hinge portions 52a and 52b and the front portions 56a and 56b of the frame 20.

The pad support plate 42 is welded between the first and second hinge portions 52a and 52b. The pad support tube 44 is welded to the pad support plate at a location between the first and second hinge portions 52a and 52b. A wheel support member 64 is formed by a hollow tube welded to the first and second front portions 56a and 56b; the wheel support member 64 forms the first and second front leg portions 40a and 40b described above.

The handle frame assembly 50b comprises first and second handle frame side members 60c and 60d. The handle frame side members 60c and 60d are hollow metal tubes that are bent at two locations. The first bend is a fairly large radius turn extending through an angle of approximately 90°, while the second bend is a somewhat tighter radius turn extending through an angle of approximately 110° to 160°. So formed, the handle frame side members 60a and 60d form the handle support portions 46a and 46b, the hinge portions 52c and 52d, and the first and second rear leg portions 40c and 40d.

The handle frame assembly 50b further comprises at least one brace member 66 welded between the first and second handle frame side members 60c and 60d.

The example pad assembly 24 of the present invention comprises a pad plate 70, a pad post 72, and a pad 74. The pad 74 is a resilient foam pad that provides a comfortable support for resting the knee of the elevated leg 16 during use of the kneeling walker 10. The pad plate 70 is

a rigid, usually metal, plate that provides structural integrity to the otherwise flexible pad 74. The pad post 72 is a metal tube that is secured by welding or the like to the bottom of the pad plate 70.

The pad post 72 is sized and dimensioned to be received within the support tube 44 described above. The support tube 44 receives the pad post 72 in a manner similar to that of a conventional bicycle seat. The location of the pad 74 relative to, for example, the hinge portions 52 of the frame 20 can be adjusted by sliding the pad post 72 within the support tube 44.

The post locking assembly 30 can be formed of any system capable of securing the pad post 72 relative to the support tube 44 to hold the pad 74 in a desired orientation relative to the frame 20. For example, a split may be formed in the support tube 44, and a cam lever may be provided to force opposing portions of the support tube 44 together. These opposing portions of the support tube 44 frictionally engage the pad post 72 and inhibit movement of the post 72 relative to the tube 44. This type of post locking assembly will be referred to herein as a friction type locking assembly. A friction type post locking assembly is typically easy to operate and allows the pad 74 to be located at any one of a continuum of locations relative to the frame 20.

Alternatively, the post locking assembly 30 may be formed by a series of pad post locking holes formed in the pad post 72 and a pad post locking member 78 that extends through the post locking hole 34 and a selected one of the pad post locking holes 76. This type of post locking assembly will be referred to as a pin type locking assembly. The pin type locking assembly provides a positive lock between the pad post 72 and support tube 44.

Referring for a moment back to FIG. 3, the handle 22 will be described in further detail. The example handle 22 comprises a handle member 80 and first and second handle posts 82a and 82b. The handle

member 80 and the handle posts 82 are formed of hollow steel tubes, with the handle posts 82a and 82b being welded at symmetrically spaced locations along, and extending parallel from, the handle member 80. In addition, the handle posts 82 are sized and dimensioned to fit within the tubes forming the handle support portions 46a and 46b of the handle frame side members 60c and 60d. In particular, the lateral spacing of the handle frame side members 60c and 60d and the distance between the handle posts 82a and 82b are substantially the same such that the handle posts 82a and 82b; the handle posts 82a and 82b are thus slidingly received within the handle support portions 46a and 46b of the handle frame side members 60c and 60d.

The handle locking assemblies 32a and 32b are formed at the intersections of the handle posts 82 and the handle support portions 46 to secure the handle member 80 in a desired location relative to the frame 20 and the pad 74. The handle locking assemblies 32 may be formed of friction type locking assemblies as generally described above.

Alternatively, as shown in FIGS. 2 and 4, the handle locking assemblies 32 may be formed by handle post locking holes 84 formed in the handle posts 82 and handle post locking members 86a and 86b. The handle post locking members 86a and 86b extend through the handle locking holes 36a and 36b and a selected pair of the handle post locking holes 84 to secure the handle member 80 in a desired relationship to the frame 20. This type of handle locking assembly is a pin type locking assembly.

When the kneeling walker 10 is in the use configuration as shown in FIGS. 2 and 4, it can be seen that the hinge portions 52a-d are all substantially parallel to each other. In addition, the large radius bend in the handle frame side members 60c and 60d causes the handle support portions 46a and 46b to extend upward in front of the pad 74 during normal use. The frame 20 is thus configured such that no portion of the

frame extends to either side, or to the rear, of the pad 74 during normal use. This allows the user 12 to have complete and unrestricted access to the pad 74 from the rear and from both sides. While the present invention in its broadest form may be embodied with other frame configurations, the example frame 20 is preferable because it allows substantially unrestricted access to the pad 74 during normal use.

Referring now to FIG. 6, depicted therein is a braking system 90 that may be used in connection with kneeling walker 10. The brake system 90 comprises a brake handle 92 attached to the handle member 80. A brake cable 94 extends from the brake handle 92 to a brake member 96. Displacing the brake handle 92 relative to the handle member 80 by squeezing or the like causes displacement of the brake member 96 such that the brake 96 frictionally engages the wheel assembly 26c to inhibit rotation of the wheel assembly 26c. The brake system 90 can take any one of a number of forms and is similar in construction to the brake assembly used by conventional bicycles.

FIG. 6 also shows that the pad assembly 24 of the kneeling walker of FIG. 6 comprises first and second pad portions 74a and 74b with a pad gap 74c arranged therebetween. The knee of the elevated leg 16 of the user 12 is arranged at the pad gap 74c to alleviate direct pressure on the knee. The size of the pad gap 74c can be determined based on the particular user 12.

Referring now to the top plan view of FIG. 3, it can be seen that the first and second front wheel assemblies 26a and 26b are spaced from a center line A of the kneeling walker 10 a distance greater than the spacing of the rear wheel assemblies 26c and 26d from the center line A. The spacing of the front wheels helps provide stability to the kneeling walker 10 during use.

The first and second wheel assemblies 26a and 26b are conventionally formed by wheels connected by an axle extending through

a wheel support member 64. In this case, the wheels of the wheel assemblies 26a and 26b both rotate about a front wheel axis B.

Referring now to the first and second rear wheel assemblies 26c and 26d, the rear wheel assemblies 26c and 26d define first and second rear wheel axes C and D. The rear wheel assemblies 26c and 26d may be fixed wheels in which the wheel axes C and D are fixed relative to the frame 20. Alternatively, the wheel assemblies 26c and 26d may be moveable wheel assemblies that allow a position of the wheel axis C and D relative to the frame 20 to be changed. Yet another embodiment of the present invention may employ moveable wheel axes having a locking assembly that allows that rear wheel axes C and D to be selectively placed in fixed or moveable configurations relative to the frame. If the rear wheel axes C and D are moveable, the kneeling walker 10 is turned by rotating the rear of the walker 10 around the front of the walker 10.

Referring now to FIGS. 7-12, depicted at 110 therein is a second embodiment of a kneeling walker constructed in accordance with, and embodying, the principles of the present invention.

The walker 110 comprises a frame 120 on which is mounted a handle 122 and a pad assembly 124. The kneeling walker assembly 110 may be used in the same general manner as the kneeling walker assembly 10 described above. In particular, the frame 120 is supported by a plurality of wheel assemblies 126. The user supports an elevated leg on the pad assembly 124. Most of the weight of the user is carried to a surface though the pad assembly 124, the frame 120, and the wheel assemblies 126. The user grasps the handle 122 for stability.

The handle 122 and the pad assembly 124 are both adjustable relative to the frame 120. In particular, FIG. 7 illustrates the pad assembly 124 in a lower position, while FIG. 8 illustrates the pad assembly 124 in an upper position. Similarly, FIG. 7 illustrates the handle 122 in a lower position, while FIG. 8 illustrates the handle 122 in an upper position. In

addition, the example handle 122 and pad assembly 124 can be moved into at least one intermediate position between the upper and lower positions depicted in FIGS. 7 and 8.

As perhaps best shown in FIGS. 9A, 9B, and 10, a post locking assembly 130 is provided to secure a position of the pad assembly 124 relative to the frame 120. Similarly, FIGS. 7, 8, 10, 11, and 12 show that at least one handle locking assembly 132 is used to secure the handle 122 relative to the frame 120. Accordingly, both the handle 122 and the pad assembly 124 can be locked into one or more of the intermediate positions between the lower and the upper positions shown in FIG. 7 and FIG. 8.

A comparison of FIGS. 7 and 12 shows that the handle 122 may further be placed in an upright position (FIG. 7) and a storage position (FIG. 12) relative to the frame 120. A hinge lock assembly 134 allows the handle 122 to be locked in either of the upright or storage positions.

FIGS. 9A and 9B further illustrate that the pad assembly 124 may be offset in either direction relative to the frame 120. Offsetting the pad assembly 124 relative to frame 120 allows the walker assembly 110 to be changed quickly and easily from a left leg support configuration (FIGS. 9A and 10) to a right leg support configuration (FIG. 9B). In the example walker assembly 110, two separate pad assemblies 124a (FIG. 9A) and 124b (FIG. 9B) would be provided for the left and right leg configurations, but the remaining components of the assembly 110 may be the same for both configurations.

Alternatively, the same pad assembly 124 may be used for both left and right leg configurations. In this case, the pad assembly 124 would simply be rotated 180° to change between the different configurations. As another alternative, the pad assembly 124 could be designed such that the pad assembly 124 may be reconfigured to change the walker assembly 110 between the left and right leg configurations.

Referring again to FIGS. 8 and 13, the construction of the example

frame 120 will now be described in further detail. The frame 120 comprises first and second side tubes 140, first and second axle tubes 142, front and rear pad support members 144, and first and second handle struts 146.

As shown in FIG. 8, the side tubes 140 are bent at two locations to form a front portion 140a, an intermediate portion 140b, and a rear portion 140c. The angle between the front and intermediate portions 140a and 140b is approximately 90°, while the angle between the intermediate and rear portions 140b and 140c is approximately 135°. During normal use on a horizontal surface, the intermediate portions 140b are substantially horizontal, the front portions 140c are substantially vertical, and the rear portions 140c extend at an angle of approximately 45° relative to horizontal. However, these angles are not important to the present invention in its broadest form, and the side tubes 140 can take other forms.

The front and rear axle tubes 142 are secured to the ends of the first and second side tubes 140 between the front portions 140a and rear portions 140c, respectively. The pad support members 144 are also secured to the side tubes between the intermediate portions 140b. During normal use on a horizontal surface, the axle tubes 142 and pad support members 144 are substantially horizontal and parallel to each other.

The handle struts 146 are secured to the intermediate portion 140b in front of the pad support members 144. As perhaps best shown in FIGS. 8 and 10, the handle struts 146 each define a pivot opening 148 the purpose of which will be described below. The first pivot openings 148 are aligned along a pivot axis A that is parallel to the axle tubes 142.

The example frame 120 is made of welded metal tubes and thus forms a rigid structure that does not deform under anticipated loads. The frame 120 may, however, be made of different materials in different forms and using other fabrication techniques. Any structure that, without

substantially deforming, transfers the loads on handle assembly 122 and on the pad assembly 124 to the wheel assemblies 126 may be used in place of the example frame 120 described herein.

Referring now to FIG. 10, it can be seen that the wheel assemblies 126 each comprise first and second wheels 150 connected to the ends of an axle member 152. The axle members 152 each extend through one of the axle tubes 142 such that one of the wheels 150 is arranged each of the four corners of the frame 120. The axle tubes 142 thus transfer loads on the frame 120 to the wheels 150 through the axle members 152. The axle members 152 may be supported directly by the axle tubes 142 or through bearing assemblies supported by the axle tubes 142.

The axes of rotation defined by the example wheels 150 are fixed. However, it may be possible for two or more of the wheels to be supported on a second axis of rotation relative to the frame 120. In particular, wheel assemblies similar to the wheel assemblies 26c and 26d of the kneeling walker assembly 10 of the first embodiment of the invention may be preferable in some circumstances.

Referring now to FIGS. 8, 11, and 12, the example handle assembly 122 will now be described in further detail. The handle assembly 122 comprises a lower portion 160 and an upper portion 162.

As perhaps best shown in FIG. 10, the lower portion 160 comprises first and second lower side members 170 and first and second horizontal members 172. The first and second lower side members 170 are secured to the first and second horizontal members 172 in a generally rectangular configuration. The members 170 and 172 are welded metal tubes in the example handle assembly 122, but other materials and attachment methods may be used.

The upper portion 162 comprises first and second upper side members 174, a handle member 176, and first and second grip members 178. The grip members 178 are arranged on the ends of the handle

member 176. The first and second upper side members 174 are secured to the handle member 176 between the grip members 178. When secured to the handle member 176, the upper side members 174 are parallel to each other. The first and second upper side members 174 are also spaced from each other a distance substantially the same as the distance between the first and second lower side members 170.

The lower side members 174 and handle member 176 are also welded metal tubes in the example handle assembly 122, but other materials and attachment methods may be used. The grip members 178 are typically made of a resilient material that facilitates gripping of the handle member 176.

As perhaps best shown in FIGS. 10 and 11, first and second flange members 180 are secured to the first and second lower side members 170. The example flange members 180 are metal plates welded to the lower side members 170, but other materials and attachment methods may be used.

The flange members 180 each define a second hinge opening 182. First hinge lock openings 184a and 184b are formed in the flange members 180 and in the lower side members 170. A fixed lock opening 186 is formed in the lower side members 170. At least one movable lock opening 188 is formed in the upper side members 170. The purpose of the second hinge opening 182, first hinge lock openings 184a and 184b, fixed lock opening 186, and movable lock opening or openings 188 will be described in further detail below.

The first and second lower side members 170 each define an inner chamber that is sized and dimensioned to receive the first and second upper side members 174. More specifically, the use of hollow welded tubes of appropriate inner and outer diameters allow the upper portion 162 to move relative to the lower portion 160 in a telescoping fashion. Accordingly, the distance between the handle member 176 and the

second hinge opening 182 can be changed by moving the upper portion 162 relative to the lower portion 160 as shown in FIGS. 7 and 8.

The handle lock assembly 132 comprises one or more pins 190 that are sized and dimensioned to extend through the fixed and movable lock openings 186 and 188. The upper portion 162 may thus be fixed relative to the lower portion 160 in a desired relationship based on the requirements of the person using the walker assembly 110. The example handle lock assembly 132 is a pin type locking assembly, but the handle lock assembly may be implemented using a friction type or other lock assembly instead.

Referring now to FIGS. 7, 10, and 12, the hinge lock assembly 134 will now be described in further detail. As perhaps best shown in FIG. 10, bolt assemblies 192 are inserted through the first pivot openings 148 and the second pivot openings 182. The bolt assemblies 192 thus attach the handle assembly 122 to the frame assembly 120 such that the handle assembly 122 may rotate about the hinge axis A between the upright and storage positions.

One or more pins 194 are used to secure the handle assembly 122 in the upright or storage positions relative to the frame 120. In particular, second hinge lock openings 196a and 196b are formed in the handle struts 146 as shown in FIG. 8. The pins 194 are passed through the first and second hinge lock openings 184a and 196a as shown in FIG. 8 to secure the handle assembly 122 in the upright position. The pins 194 are passed through the first and second hinge lock openings 184b and 196b as shown in FIG. 12 to secure the handle assembly 122 in the storage position.

Referring now to FIGS. 8 and 9A and 9B, the construction of the pad assembly 124 will now be described in further detail. The example pad assembly 124 comprises a platform 210, first and second cushion members 212 and 214, and a post 216. The platform 210 is a rigid

member. The first and second cushion members 212 and 214 are soft, resilient members that cushion the user's knee when supported by the kneeling walker assembly 110. The post 216 is rigidly secured to the platform 210 on the opposite side from the cushion members 212 and 214. The platform 210 thus supports the cushion members 212 and 214 and transfers loads on the cushion members 212 and 214 to the post 216.

As shown in FIGS. 9A and 9B, the platform 210 is offset in either direction relative to the post 216. In addition, FIG. 10 shows that the post 216 is aligned with a centerline B defined by the frame 120. The frame 120 is substantially symmetrical about the centerline B.

An optional stop projection 218 is secured to the post 216 to prevent the platform 210 from coming into contact with the frame 120.

The post locking assembly 130 will now be described in further detail with reference to FIGS. 7, 9A and 9B, and 13. The post locking system 130 comprises first and second channel members 220 and 222 secured to the pad support members 144 described above. The pad support members 144 and channel members 220 and 222 and define a post opening 224. The post 216 is sized and dimensioned to fit within the post opening 224 such that the post 216 may telescope relative to the frame 120. Optionally, some or all of the surfaces defining the post opening 224 may be lined with a low friction material 226 that facilitates movement of the post 216 in the post opening 224.

Outer lock openings 230 are formed in the channel members 220 and 222. In addition, one or more inner lock openings 232 are formed in the post 216. The post 216 may be fixed relative to the channel members 220 and 222 by inserting a post pin 234 through the outer lock openings 230 and a selected one (or pair) of inner lock openings 232. The post locking assembly 130 thus forms a pin-type locking system, but other types of locking systems may be used.

Referring now to FIG. 7, it can be seen that the kneeling walker

system 110 further comprises an optional brake system 240 comprising a brake lever 242, a brake cable 244, a brake member 246, and a return spring 248. Displacing the brake lever 242 causes the brake cable 244 to move the brake member 246 against one of the wheels 150 against the force of the return spring 248. When the brake lever 242 is released, the return spring pulls the brake member 246 away from the wheel 150.

From the foregoing, it should be clear that the present invention may be embodied in forms of most specifically described above. In particular, while the example handle 122 comprises two handle post 182a and 182b, the frame may be configured such that the handle extends from a single handle post in a manner similar to that of a bicycle. Other alternations should be apparent to one of ordinary skill of the art, and the scope of the present invention should be determined by the claims appended hereto and not the foregoing detailed description.